A GRAND-TACTICAL GAME OF THE WWII TANK BATTLE IN RUSSIA

OBJECTIVE: KURSK™

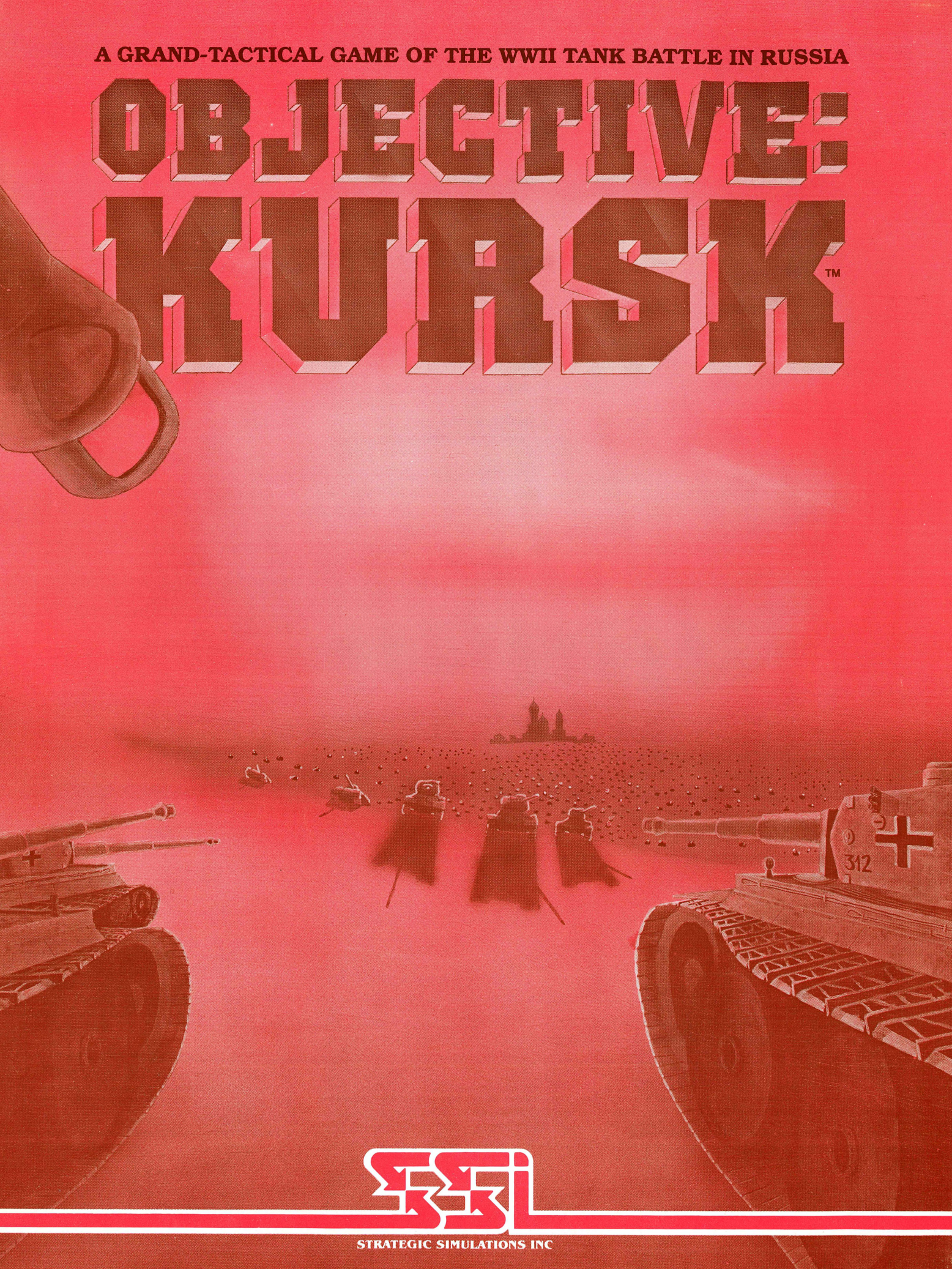

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TABLE OF CONTENTS

PAGE

1.0 INTRODUCTION 1
Description of Action • Talking to the Computer • Saving a Game
The Map • Starting the Game (Apple) • Starting the Game (Atari)

2.0 GENERAL DESCRIPTION 2
Parts Inventory • Abbreviations

3.0 SEQUENCE OF PLAY 2
Determining Conditions of Play • Historical Set-Up • Sequence of Play
Keeping Time • Game Duration

4.0 GROUP ADJUSTMENT PHASE 2
Combat Groups • Combat Units • Dividing Combat Groups • Transferring Units
The Map Display • Ending the Game • Renumbering Groups

5.0 SUPPLY PHASE 2
Depot Movement • Supply Distribution • New Depots • Supply Usage

6.0 TACTICAL PLOT – ROAD MOVEMENT PHASE 3
Selecting Combat Groups • Mode Selection • Road Movement • Plotting Tactical Movement
Combat Situations • Plotting Bombardments • Plotting Recon Missions

7.0 AIR MISSIONS 4
Planning Airstrikes

8.0 COMBAT RESULTS CALCULATIONS 4
Weapon Systems • Disruption • Disruption Effects • Terrain Effects
Zones of Control • Attack Strength Allocation • Morale Reduction

9.0 TACTICAL EXECUTION & COMBAT PHASE 5
Airstrike Resolution • Bombardment & Recon Resolution
Tactical Movement • Minefield Attacks • Opportunity Fire
Assault Combat • Retreats • Advance After Combat • Combat Reports

10.0 WEATHER 5
Rain • Rain Effects

11.0 VICTORY DETERMINATION 5
Scoring • Victory Levels

12.0 SOLITAIRE PLAY 6

13.0 ORDER OF BATTLE 6

14.0 STANDARD DIVISION CONTENTS 6

1.0 INTRODUCTION

In the Battle of Kursk the German Army committed their best armored formations in an attempt to encircle and destroy the powerful Soviet forces located in the Kursk salient. The German plan called for the Ninth Army to attack from the north and the Fourth Panzer Army to attack from the south of the salient. OBJECTIVE KURSK is a grand-tactical level game covering the Fourth Panzer Army attacks against the Soviet forces on the south flank of the Kursk salient.

1.1 Description of Action

Each game turn consists of 12 hours of operations. Operations consist of supplying and moving combat forces, changing formation, planning assaults, air strikes and artillery bombardments and resolving combat situations.

1.2 Talking to the Computer

To enter a response to the computer that consists of numbers (such as the number of bombers in an airstrike) type the number into the computer and press the <RETURN> key. To select a routine from a menu or answer a Yes/No question just press the desired key.

WHERE THE EXIT COMMAND IS NOT SPECIFIED, PRESS <RETURN> TO QUIT THE ROUTINE.

1.3 Saving a Game

At the end of each player's ORDERS PHASE and at the end of each turn the computer will allow the player(s) to save the game in progress. You will need a scratch disk to store the saved game data. Save game disks for the Apple must be initialized for SSI use during a game by following instructions included in the game program. Atari users may use any disk that has been properly formatted for use on the Atari.Once a game is saved you will be able to restart it at the point where you left off.

WHEN RESTARTING A SAVED GAME YOU MUST SET THE CORRECT SOLITAIRE LEVEL AND NUMBER OF PLAYERS ON THE OPENING MENU.

1.4 The Map

The game map covers the battlefields on the south flank of the Kursk salient, from Kursk in the north to Belgorod in the south. Movement around the map is controlled by a hexagon grid system (31 × 32 hexes) with each hexagon representing 3 miles.

1.5 Starting the Game (Apple)

To begin the game, boot your game disk and the game will begin automatically. If you are using an Apple® II with Pascal you must first use your BASICS disk. If you are using an Apple® III you must first go into Apple® II emulation mode.

1.6 Starting the Game (Atari)

To begin the game, boot the Scenario side of your disk. After selecting the starting values for your game, you will be told to insert the Game side of your disk. Remove all cartridges from your computer before booting your disk.

2.0 GENERAL DESCRIPTION

2.1 Parts Inventory

a. Game box
b. Rule book
c. 5¼" game disk
d. Two map/data cards

2.2 Abbreviations

Abbreviations used in the game are listed below:

DIV	division
BDE	brigade
RGT	regiment
BN	battalion
GDS	Guards
MECH	mechanized
MOT	motorized
PZG	panzergrenadier
INF	infantry
ART	artillery
AT	anti-tank
ARM	armor
SPA	self-propelled artillery
AC	armored car
H	howitzer
FH	field howitzer
M	mortar
RL	rocket launcher
ENGR	engineer

Combat formations with names instead of numbers are abbreviated as follows:

LAH	Leibstandarte Adolf Hitler
DR	Das Reich
TOT	Totenkopf
WIK	Wiking
GD	Grossdeuchland
VOR	Voronezh

3.0 SEQUENCE OF PLAY

OBJECTIVE KURSK is a two-sided game: German vs. Soviet. The German forces must be commanded by a human player. The Soviet forces may be commanded by either a human or the computer.

3.1 Determining Conditions of Play

At the start of the game the player(s) must determine the conditions under which the game will be played.

On the APPLE® version the conditions may be changed by entering the following numbers:

(1) NEW GAME or SAVED GAME
(2) 1 DISK DRIVE or 2 DISK DRIVES
(3) SOLITAIRE or TWO PLAYERS
(4) SOLITAIRE LEVEL OF DIFFICULTY

On the ATARI® version:

(1) NEW GAME or SAVED GAME
(2) SOLITAIRE or TWO PLAYERS
(3) SOLITAIRE LEVEL OF DIFFICULTY

3.2 Historical Set-Up

At the start of the game the computer will assign all combat forces to their starting locations prior to the battle.

3.3 Sequence of Play

1. Soviet Group Adjustment Phase
2. Soviet Supply Phase
3. Soviet Tactical Plot & Road Movement Phase
4. Soviet Air Mission Allocation Phase
5. Soviet Save Game Phase
6. German Group Adjustment Phase
7. German Supply Phase
8. German Tactical Plot & Road Movement Phase
9. German Air Mission Allocation Phase
10. German Save Game Phase
11. Tactical Execution & Combat Phase
12. Save-Game Phase

3.4 Keeping Time

Each game turn represents 12 hours. AM turns are daylight turns and PM turns are night turns. The calendar day is adjusted at the start of each AM turn.

3.5 Game Duration

The German player may end the game at any time. The game will end automatically at the end of the 7/15/43 PM turn.

4.0 GROUP ADJUSTMENT PHASE

During the group adjustment phase the player(s) may divide their combat groups, transfer units from one group to another, view the map display or end the game.

4.1 Combat Groups

Combat groups may contain from 1 to 5 brigades, regiments or battalions (units). Each combat group (CG) has an identification number and a divisional designation. It is possible for more than one CG to have the same divisional designation. Different CGs will never have the same group identification (ID) number.

Group ID numbers 1-63 are reserved for German CGs. Group ID numbers 64-127 are reserved for Soviet CGs.

EXAMPLE: LAH SS PZG GROUP 3

The example shows the CGs divisional designation and group ID number as it would appear on your display. LAH SS PZG is the divisional designation and "3" is the group ID number.

CGs with the designations: PANZER, PZG, TANK or MECH are considered to be "mechanized" groups. All other CGs are considered to be "infantry" groups. Mechanized groups will be represented by an oval symbol when displayed on the map. Infantry groups will be represented by an "x" symbol when displayed on the map. Mechanized groups have a greater movement rate than infantry groups.

4.2 Combat Units

Each CG may contain from 1 to 5 combat units (CUs). CUs are given a descriptive name to reflect their basic function. Each CU may contain up to 6 different weapon systems. Weapon systems may be either infantry, artillery or AFV.

EXAMPLE: TANK BDE
65 T-34 12 INF

In the example a CU is shown as it would appear on your display. TANK BDE is the descriptive name. The CU contains 2 different weapon systems: 65 T-34 type tanks and 12 infantry squads (120 men).

EXAMPLE: ARM INF RGT
122 INF 16 50AT 4 75AT
8 75H 2 105H 12 81M

In this example, ARM INF RGT is the descriptive name. The CU contains 122 infantry squads, 16 50mm anti-tank guns, 4 75mm anti-tank guns, 8 75mm howitzers, 2 105mm howitzers and 12 81mm mortars.

4.3 Dividing Combat Groups

Enter the group ID number of the CG you wish to divide. The computer will automatically select the lowest numbered "empty" group to receive the divided units. The computer will then list the units in the dividing CG. Enter the unit number (0-4) for each unit you wish to transfer to the new CG. When you have completed your transfers just press <Q> to quit the routine.

The newly formed CG will have the same divisional designation, morale rating and supply level as the dividing CG.

4.4 Transferring Units

Units may be transferred between two CGs that occupy the same hexagon on the map. Both the "gaining" and "losing" CG must have the same divisional designation.

Enter the group ID number of the losing CG. The computer will automatically select the other CG in the hex as the gaining CG. The procedure for transferring units is the same as described in 4.3. A CG may never contain more than 5 units.

If the morale rating of the gaining CG is greater than the morale rating of the losing CG, then the morale of the gaining CG will be reduced to the level of the losing CG.

4.5 The Map Display

The map used in OBJECTIVE KURSK employs a hexagon grid 32 hexes high by 31 hexes wide. Only a fraction of the map (7 hexes high by 13 hexes wide) may be viewed at one time. By pressing the keys 1-6 the cursor can be moved around the map (1-N, 2-NE, 3-SE, 4-S, 5-SW, 6-NW). If the cursor is moved to the edge of the display then the map display will scroll to reveal the hidden portions of the map.

German combat group symbols contain the letters "GE". Soviet combat group symbols contain the letters "SU".

4.6 Ending the Game

The German player may elect to end the game at any time. The computer will display the final score.

4.7 Renumbering Groups

The players may renumber groups using the (R)ENUMBER GROUP routine. Only groups that are currently on the map may be renumbered.

5.0 SUPPLY PHASE

Supply points are used each time a CG moves or performs a combat function. During the supply phase the player(s) move their depots to the front line areas to replenish the supplies of their CGs.

5.1 Depot Movement

German depots always start their movement on a road hex on the south edge of the map. Soviet depots always start their movement on a road hex on the east edge of the map. Depots always start their move with a "supply level" of 15. A depot's supply level represents the maximum number of supply points it may distribute to EACH friendly CG.

Depots may be moved in the various directions by pressing keys 1-6 (1-N, 2-NE, 3-SE, 4-S, 5-SW, 6-NW). For each hex a depot moves its supply level will be decreased. The supply level reduction varies with the

type of terrain entered and the weather as shown below:

	CLEAR	RAIN
road	1 (¼)	4 (1)
clear	1	4
town	1 (¼)	4 (1)
woods	1	4
gully	1	16

The numbers shown in parentheses indicate the supply level reduction for movement along a road (from one road/town hex to another road/town hex).

A depot may never move adjacent to an enemy CG. German depots may never enter a minefield. A depot may not cross a river hexside during a rain turn unless it is moving along a road.

5.2 Supply Distribution

At any time during a depot's move the depot may distribute supplies by pressing the (S)UPPLY key. All friendly CGs within 2 hexes of the depot may receive supplies. CGs may only receive supplies once per supply phase. CGs that receive supplies will disappear from the map for the remainder of the supply phase.

The number of supply points received by a CG will be equal to the supply level of the depot. The maximum number of supply points that a CG may "carry" at one time will vary with the CGs MODE (see 6.2).

5.3 New Depots

The player(s) may request new depots at any time during the supply phase by pressing the (N)EW DEPOT key. The new depot will begin on the same side of the map, but on a different road hex. German depots may enter on two different roads on the south edge of the map. Soviet depots may enter on five different roads on the east edge of the map. The entry roads will be changed each time a new depot is requested. The player should continue pressing the (N) key until the depot begins in the desired area.

5.4 Supply Usage

Combat groups use 1 supply point for each hex that they move. CGs use 1 supply point each time they employ (1) bombardment fire (2) opportunity fire (3) defensive fire (4) offensive fire. Unsupplied CGs may not move or perform any fire missions except defensive fire (at 50% normal effectiveness).

6.0 TACTICAL PLOT — ROAD MOVEMENT PHASE

During the tactical plot/road movement phase the player(s) may alter the mode of their CGs, perform road movement with CGs in "road" mode, plot tactical movement for CGs in "assault" or "mobile" mode or plot bombardment fire for CGs in "static" mode.

6.1 Selecting Combat Groups

Move the cursor over the CG to be moved/plotted and press the (G)ET UNIT key. The computer will display the CG's designation, group ID number and mode. If there are two CGs in the hex and you wish to go to the other CG then press then (Q)UIT key to get the bottom CG in the stack.

When you have completed your movement/plots for a CG you may hit the (Q)UIT key and move the cursor to get another friendly CG. Instead of the (Q)UIT key, you may hit the (N)EXT GROUP key and the computer will automatically "get" the CG with the next highest group ID number.

6.2 Mode Selection

A CG's mode will affect its ability to move and fight during the current turn. CGs in mobile or road mode may not use their towed artillery during the current turn. The movement rates and defense adjustments for each mode are shown below:

	MECH MOVE	INF MOVE	DEFENSE
static	0	0	×1.5
assault	1	1	×1.0
mobile	4	2	×0.75
road	24	6	×0.62

A CG's ability to carry supplies is affected by its mode as shown below:

	MAX SUPPLY LEVEL
static	36
assault	18
mobile	12
road	24

You may alter the current mode of a CG by pressing the S, A, M or R keys. A CG may not be placed in road mode unless it currently occupies a road or town hex. German CGs may not be placed in road mode if they occupy a minefield hex. CGs may not be placed in road mode if they are currently adjacent to an enemy CG.

6.3 Road Movement

Only CGs in road mode may employ road movement. When using road movement a CG may only enter road or town hexes. CGs may never move adjacent to an enemy CG when using road movement. German CGs may never use road movement into a minefield hex. A CG may never enter a hex that is currently occupied by TWO friendly CGs.

Mechanized CGs have a movement allowance of 24 hexes. Infantry CGs have a movement allowance of 6 hexes. It is possible to use part of a CG's road movement allowance, then move or plot other groups, and finish the CG's movement later in the turn.

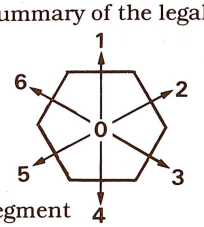
6.4 Plotting Tactical Movement

All movement except road movement must be planned in advance (plotted) during the TACTICAL PLOT — ROAD MOVEMENT PHASE. CGs perform their planned moves during the TACTICAL EXECUTION & COMBAT PHASE.

A tactical plot consists of from 1 to 4 numbers with each number representing an instruction to move in a particular direction during a particular TACTICAL EXECUTION segment. There are 4 movement segments during the TACTICAL EXECUTION & COMBAT PHASE. The first number in the tactical plot instructs the CG to move in a particular direction during the first movement segment, the second number in the tactical plot refers to the second segment, etc.

Listed below is a summary of the legal movement plots:

1 move north
2 move northeast
3 move southeast
4 move south
5 move southwest
6 move northwest
0 do not move this segment



EXAMPLE: PLOT 0321

In the example tactical plot shown above the CG would not move during segment 1, would move southeast during segment 2, northeast during segment 3 and north during segment 4.

Only CGs in assault or mobile mode may perform tactical movement. The number of hexes that may be moved using tactical movement is affected by the type of CG involved (mechanized or infantry) and the CG's mode. Tactical movement allowances are shown below:

	MECHANIZED	INFANTRY
assault	1	1
mobile	4	2

INFANTRY CGs MAY ONLY USE TACTICAL MOVEMENT DURING MOVEMENT SEGMENTS 1 & 2.

Mechanized CGs in assault mode may execute their 1 move during any of the four movement segments (a plot of 0003 would instruct a CG to save its move until the 4th movement segment). Infantry CGs in assault mode may execute their 1 move during either of the first 2 segments.

6.5 Combat Situations

Combat situations will occur whenever a CG attempts to execute a tactical move into a hex occupied by an enemy CG. If more than one friendly CG attempts to enter a particular enemy occupied hex during the same movement segment then these friendly CGs will combine their combat strengths to attack the enemy CG(s) in the hex.

An "S" command may be inserted at the end of a CG's tactical plot if you want the CG to attack in a particular direction but not move or advance. The S should be the last figure in the tactical plot; any instructions that appear after the S will be ignored. The S command will affect only the last segment in which movement is plotted.

EXAMPLE: PLOT 111S

In the example, the CG would move north during segments 1 & 2. During segment 3 the CG would attack if the hex to the north is enemy occupied but would not move or advance after combat.

The maximum length of a tactical plot is four symbols. A "2322S" plot would be treated as "2322" by the computer.

6.6 Plotting Bombardments

Only CGs in static mode may perform bombardments. To perform a bombardment a CG must contain FH (field howitzer) type weapons. Eligible CGs may bombard enemy CGs either 1 or 2 hexes away.

Bombardments are plotted the same as tactical movement. Bombardment plots must start with a "B" symbol. The 2nd (and 3rd) symbol(s) indicate the direction the guns are firing.

EXAMPLE: PLOT B12

In the example plot, the target hex is located 2 hexes away; one hex in direction 1 and one hex in direction 2.

EXAMPLE: PLOT B3

In the example plot the target hex is located one hex in direction 3.

6.7 Plotting Recon Missions

CGs may perform recon missions to "observe" the contents of an adjacent hex. Recon plots must start with an "R" symbol.

The second symbol indicates the direction (from the recon CG) to be searched.

EXAMPLE: PLOT R4

In the example plot, the CG will search the adjacent hex to the south.

Recon missions are executed BEFORE the tactical movement segments.

7.0 AIR MISSIONS

The player(s) may assign friendly bombers to attack enemy CGs. Friendly fighters may be assigned to escort friendly bombers or intercept enemy bomber missions.

7.1 Planning Airstrikes

Each player may plan up to 5 airstrikes each AM turn. During the air missions phase the computer will display the number of friendly fighters and bombers that are available that turn. The player may move the cursor to the desired target by pressing 1-6 directional keys. Press the (7) SELECT TARGET key when the cursor is over the hex you wish to attack. The player must indicate how many bombers and how many fighter escorts will participate in the airstrike. Each aircraft point equals 4 actual aircraft.

Soviet airstrikes may only be directed against a hex that is adjacent to a Soviet CG.

After all airstrikes have been planned, any fighters that have not been assigned to escort will automatically be used for C.A.P. (combat air patrol) over the battlefield. C.A.P. fighters will attempt to shoot down enemy bombers before they can attack your CGs.

8.0 COMBAT RESULTS CALCULATIONS

There are 6 types of combat that occur in the game: (1) airstrike (2) bombardment (3) opportunity fire (4) minefield attack (5) defensive fire (6) offensive fire. All forms of combat use the same general method for calculating casualties: attack strength / defense strength = casualties. The attack and defense strengths may be modified according to the type of combat, terrain, or CG mode. Also, a random factor is added to all combat calculations.

8.1 Weapon Systems

Listed below are the weapon systems used in the game including their attack strength (AS), defense strength (DS) and weapon type (WT):

	AS	DS	WT
afv			
PZ-II	2	5	AP
PZ-III	5	6	AP
PZ-IV	7	6	AP
PZ-V	8	7	AP
PZ-VI	9	9	AP
SG-III	6	7	AP
JPZ-IV	7	6	AP
T-34	7	7	AP
KV-1	7	8	AP
SU-76	6	6	AP
SU-85	8	8	AP
SU-152	5	9	HE
AC	1	4	HE
towed guns			
50AT	3	1	AP
75AT	5	1	AP
88AT	7	1	AP
45AT	2	1	AP
76AT	5	1	AP
75H	1	1	HE
105H	2	1	HE
150H	3	1	HE
122H	2	1	HE
152H	3	1	HE
105FH	2	1	HE
150FH	3	1	HE
170FH	4	1	HE
152FH	3	1	HE
203FH	5	1	HE
81M	1	2	HE
82M	1	2	HE
120M	2	1	HE
132RL	4	1	HE
150RL	4	1	HE
infantry			
INF	2	3	I
ENGR	3	3	I

All systems that have a DS greater than 3 are considered to be AFV (armored fighting vehicle) target types. Systems with a DS less than 4 are considered to be SOFT target types. AP type weapons are designed to destroy AFV targets while HE and I type weapons are designed to destroy SOFT targets. AP weapons are assumed to have an AS of 1 when attacking SOFT targets. HE and I weapons are assumed to have an AS of 1 when attacking AFV targets.

AFV type weapons are assumed to have an AS of 6 when using OFFENSIVE FIRE against SOFT targets (the SU-152 has an AS of 10).

I type weapons have their AS enhanced when using DEFENSIVE FIRE against AFVs IF the attacking AFVs out-number the attacking INF squads (the degree of enhancement varies with the attacking AFV to INF ratio).

CGs in mobile or road mode may never fire their towed gun type weapons.

During airstrike combat, each German bomber point has an AS of 3 against AFV targets and an AS of 1 against SOFT targets. Soviet bombers are HALF as effective as German bombers.

During minefield attacks all targets are considered to have a DS of 4. The minefield attacks with a strength of 80.

During OPPORTUNITY FIRE, HE and AP type weapons may fire using 1/2 of their normal AS. I type weapons may not perform opportunity fire.

During OFFENSIVE FIRE, towed gun weapons fire using 1/2 their normal AS.

During BOMBARDMENT FIRE only FH type weapons may fire (using 1/2 their normal AS).

8.2 Disruption

In addition to taking casualties, a CG will suffer "disruption" when attacked. When attacking SOFT targets the disruption will be equal to the ATTACK STRENGTH / TOTAL TARGETS. When attacking AFV targets the disruption will be equal to AFVs DESTROYED / TOTAL TARGETS.

CGs that are attacked more than once in a turn will accumulate disruption points (up to 99). At the start of each turn all CGs will have their disruption points returned to ZERO.

Assaulting CGs that force the defender to retreat will have their disruption level reduced by their morale rating (if the morale rating is 80 then the disruption level is reduced by 80%).

Assaulting CGs that fail to force the defender to retreat will have their disruption level reduced by one-half of their morale rating.

8.3 Disruption Effects

Following OFFENSIVE FIRE, if a defending CG's accumulated disruption level is greater than its morale rating and the disruption suffered by the attacker during the combat was less than or equal to 89, then the defending CG will be forced to retreat.

If a CG's disruption level is greater than its morale rating, then it will be unable to move any further that turn.

When firing, a CG's attack strength will be reduced by its disruption level (if the disruption level is 50 then the AS is reduced by 50%). A unit's AS will never be reduced below 1 due to disruption.

8.4 Terrain Effects

CGs defending in a WOODS or TOWN hex will have their defense strength DOUBLED.

Soviet CGs defending in a MINEFIELD hex will have their defense strength DOUBLED.

CGs located in a GULLY hex, attacking into a non-GULLY hex will have their attack strength HALVED. CGs located in a non-GULLY hex, attacking into a GULLY hex will have their attack strength DOUBLED.

8.5 Zones of Control

Every CG has a zone of control (ZOC) that consists of the hex that it occupies and the six adjacent hexes.

Friendly depots or CGs in road mode may never enter an enemy ZOC. If a CG moves directly from one enemy ZOC into another enemy ZOC then that CG may be attacked by enemy OPPORTUNITY FIRE (see 9.5). CGs may not retreat into an enemy ZOC unless the retreat hex is currently occupied by a friendly CG in either static or assault mode.

8.6 Attack Strength Allocation

In most combat situations, the CG being attacked will consist of several different weapon systems. In calculating combat results the total attack strength is divided to attack each weapon system separately. The percentage of the total attack strength to attack each weapon system is equal to NUMBER IN WEAPON SYSTEM / TOTAL TARGETS.

EXAMPLE: DEFENDING CG CONTAINS:
50 INF 25 45AT 25 76AT

The total number of targets equals 100. 50% of the attack strength would attack the INF, 25% of the attack strength would attack each type of anti-tank gun.

8.7 Morale Reduction

CGs have their morale rating reduced by 1 point each time they perform an assault or are attacked. CGs with a morale less than 50 will gain 1 morale point at the start of each turn.

9.0 TACTICAL EXECUTION & COMBAT PHASE

During the tactical execution & combat phase (TEC phase) movement and combat functions are performed in the following sequence:

1. airstrike resolution
2. bombardment & recon resolution
3. segment 1
   a. German movement
   b. German attack resolution
   c. Soviet movement
   d. Soviet attack resolution
4. segment 2
5. segment 3
6. segment 4

9.1 Airstrike Resolution

Airstrike resolution consists of (1) air to air combat and (2) bomber attacks.

Air to air combat consists of C.A.P. vs escort combat and C.A.P. vs bomber combat. The number of C.A.P. fighters to intercept each enemy airstrike is equal to 1/2 the total number of fighter flying C.A.P.. The number of C.A.P. fighters that must fight the escort is equal to the number of intercepting C.A.P. fighters or the number of escorting fighters, whichever is LESS. The number of C.A.P. fighters that may engage the bombers is equal to the number of intercepting fighters minus the number of escorting fighters.

Listed below are the air to air accuracy ratings for aircraft:

	vs FIGHTER	vs BOMBER
German Fighter	20%	40%
Soviet Fighter	10%	40%
Bomber	1%	–

Prior to bombing the target each bomber will have a 3% chance of being destroyed by FLAK.

Bomber attacks will cause casualties and disruption in the target CG(s). Bombers will have their effectiveness enhanced if fewer than 50 C.A.P. fighters intercepted the airstrike. The bomber effectiveness adjustments are shown below:

C.A.P.	BOMBER EFFECTIVENESS
40	×1.2
30	×1.4
20	×1.6
10	×1.8
0	×2.0

9.2 Bombardment & Recon Resolution

Only the field howitzer (FH) type weapons may fire bombardments. Bombardment attacks are resolved at 1/2 the FH weapon's normal attack strength. During PM turns, bombardment effectiveness will be HALVED. Bombardments cause casualties and disruption in the target CG(s).

For each recon mission the computer will display the approximate number of AFVs, ARTILLERY and INFANTRY in the searched hex.

9.3 Tactical Movement

CGs will execute tactical movement in accordance with their tactical plots. Tactical movement may initiate MINEFIELD ATTACKS, OPPORTUNITY FIRE or ASSAULT COMBAT.

CGs that have a disruption level greater than their morale rating will be unable to execute their remaining tactical plots. A CG may not move into a hex that is currently occupied by TWO friendly CGs (its remaining tactical plot will be aborted).

9.4 Minefield Attacks

Minefield attacks are initiated whenever a German CG attempts to LEAVE a minefield hex. Prior to the minefield attack the CG will have a chance to destroy the minefield. The chance of destroying the minefield is equal to (50 + ENGR squads) / 180. If the minefield is destroyed then it will not attack the CG.

Minefields have an attack strength of 80 against both AFV and SOFT targets. Minefield attacks cause both casualties and disruption in the moving CG.

Minefield attacks will occur against CGs that execute a move plot of "0" in a minefield.

9.5 Opportunity Fire

If a CG moves directly from one enemy ZOC into another enemy ZOC then the CG may be targeted for OPPORTUNITY FIRE. Enemy CGs that are adjacent to the hex in which the moving CG started AND adjacent to the hex that the moving CG enters may fire if they are in STATIC mode.

Only AFV and TOWED GUN weapon systems will perform opportunity fire. Opportunity fire is resolved at 1/2 of the normal attack strength. During PM turns, opportunity fire attack strengths will be HALVED.

9.6 Assault Combat

Assault combat is initiated whenever a CG attempts to enter a hex occupied by an enemy CG. Assault combat is resolved at the end of the movement segment. All CGs that attempted to enter the same enemy hex will combine their attack strengths.

Assault combat consists of (1) defensive fire and (2) offensive fire (offensive and defensive fire are considered to occur simultaneously). The CG(s) in the "enemy" hex combine their attack strengths to perform defensive fire. During offensive fire towed gun weapons have their attack strengths halved (CGs in mobile mode may not fire their towed guns).

9.7 Retreats

Following assault combat, defending CGs will be forced to retreat if their accumulated disruption level is greater than their morale rating and the disruption suffered by the attacker during the combat was less than or equal to 89. CGs may not retreat into an enemy ZOC unless that hex is currently occupied by a friendly CG in either static or assault mode. CGs may not retreat into a hex that is currently occupied by TWO friendly CGs. If the defending CG(s) are unable to retreat, then they will be destroyed instead. CGs that retreat have their supply level reduced to zero and are place in mobile mode.

9.8 Advance After Combat

Following assault combat, if the defender was forced to retreat then the attacking CG(s) may advance into the vacated hex. CGs may not advance if their disruption level is greater than their morale rating. A maximum of TWO of the attacking CGs may advance after combat. CGs that FAIL to advance after assault combat will have the remainder of their tactical plot canceled. CGs that advance after combat will have their disruption level reduced according to their morale rating (if the morale rating is 80 then the disruption level is reduced by 80%). Assaulting CGs that fail to force the defender to retreat will have their disruption level reduced by ½ of their moral rating.

9.9 Combat Reports

As each type of attack is being resolved, the computer will display the DISRUPTION points added to the defending and attacking forces.

10.0 WEATHER

The weather may be either CLEAR or RAIN. The weather is subject to change at the start of each turn.

10.1 Rain

There is a 10% chance that it will rain each game turn. Rain hinders CG movement and supply operations.

10.2 Rain Effects

On rain turns, streams turn into rivers and gullies turn into swamps. CGs must use their engineers to bridge the rivers and clear paths through the "swamps".

CGs attempting to cross a river or exit a gully hex during a rain turn will suffer disruption; the greater the number of engineers in the group, the smaller the amount of disruption incurred. A maximum disruption level of 90 will be suffered for each hex moved. Rain has no effect on road movement.

Rain QUADRUPLES the movement penalty for supply depots.

11.0 VICTORY DETERMINATION

At the end of the game, the computer calculates the score. Victory is determined based upon point differentials.

11.1 Scoring

Victory Points (VPs) are awarded for the control of towns and for surviving combat forces. A town is controlled by the player who last had a CG or supply depot move onto the town (i.e., a town need not be garrisoned in order for it to be under a player's control). Listed below are the VPs awarded for control of each town on the map:

Lgov	10000	Oboyan	10000
Kursk	25000	Shchigry	10000
Belgorod	25000	Prokhorovka	5000
Sudzha	5000	Korocha	5000

Points awarded for each surviving WEAPON are equal to the weapon's AS plus its DS.

EXAMPLE: PZ-VI = 18 VPs (9 + 9)
88AT = 8 VPs (7 + 1)

11.2 Victory Levels

To determine the victory level subtract the total German VPs from the total Soviet VPs and compare the result to the following table:

20000 or less	German Decisive
20001 to 40000	German Substantive
40001 to 60000	German Marginal
60001 to 80000	Draw
80001 to 100000	Soviet Marginal
100001 to 120000	Soviet Substantive
120001 or more	Soviet Decisive

12.0 SOLITAIRE PLAY

When playing solitaire games the computer will command the Soviet forces. There are 4 levels of solitaire difficulty. The level of difficulty is determined when starting a new game and may be altered when restarting a saved game. As the level number is DECREASED the Soviet minefields will become more effective and the Soviet reinforcements will arrive sooner (reinforcements will arrive 2 turns EARLIER for each level DECREASED and 2 turns LATER for each level INCREASED). These levels may be used to handicap a two-player game if desired. Level 3 is considered the "historical" level.

It is possible to start a game in solitaire mode, save it, and restart it as a two-player game. To do this set the main menu to two-player mode before reloading the saved game data.

It is possible to save a two-player game and restart it as a solitaire game. This should only be done experimentally as the computer may be confused by many human devised deployments.

13.0 ORDER OF BATTLE

GERMAN

52 Korps:
57, 255, 332 Infantry

48 Pz Korps:
3, 11 Panzer; GD PzG; 167 Infantry

Group Raus:
106, 320 Infantry

2 SS Pz Korps:
LAH, DR, TOT SS PzG

3 Pz Korps:
6, 7, 19 Panzer; 168 Infantry

Reinforcements

WIK SS PzG (Turn 8) (E)
23 Panzer (Turn 10) (E)
16 PzG (Turn 12) (E)

SOVIET

40 Army:
141, 142, 143, 144, 145, 146, 309 Rifle;
40 Army Artillery

6 Gds Army:
66, 67, 68, 69, 70, 71, 89 Gds Rifle;
6 Gds Army Artillery

7 Gds Army:
72, 73, 74, 75, 76, 77 Gds Rifle; 213 Rifle;
7 Gds Army Artillery

1 Tank Army:
3 Mech; 3, 6 Tank

Voronezh Front:
105, 106, 108 Gds Rifle; Voronezh Front Artillery

Reinforcements

69 Army (Turn 7) (D):
107, 111, 183, 270, 305 Rifle

Voronezh Front Reserve (Turn 6):
2 Gds Tank (D); 4 Gds Tank (B);
5 Gds Tank (C)

5 Gds Tank Army (Turn 8):
5 Gds Mech (B); 18 Tank (A); 29 Tank (C)

14.0 STANDARD DIVISION CONTENTS

GERMAN*	MORALE	AFV	GUNS	INF
PZG	90	246	222	382
SS PZG	90	220	222	370
PZ	80	172	174	306
INF	70	0	222	438
SOVIET	**MORALE**	**AFV**	**GUNS**	**INF**
GDS MECH	90	261	278	566
GDS TANK	85	250	166	302
MECH	80	240	278	554
TANK	75	250	166	302
GDS RIFLE	75	0	192	514
RIFLE**	65	0	156	460
ARTILLERY	50	0	356	0

* Some German divisions are understrength (especially those entering the game as reinforcements).

** Most Russian rifle divisions are understrength (in many cases by as much as 50%).

CREDITS

Game Design and Programming
Gary Grigsby

Game Development
Joel Billings

Historical Research
Michael Musser

Customized Disk Operating System
(Apple Version)
Roland Gustafsson

Art & Graphic Design
Louis Hsu Saekow,
William Carman and Kathryn Lee

Typesetting
Abra Type

Printing
A&a Printers and Lithographers

APPLE® version: Produced using copyrighted software products of Einstein Corporation.

ATARI® version: Produced using copyrighted software products of Monarch Data Systems, Cochituate, MA 01778.

If you have any questions or problems regarding the program or game, please send a self- addressed, stamped envelope with your question to: *STRATEGIC SIMULATIONS INC, 883 Stierlin Road, Bldg. A-200, Mountain View, CA 94043-1983.*

Or call our Hotline Number: **(415) 964-1200** every weekday, 9 to 5 (P.S.T.).